

any modifications or equivalents within the scope of the claims.

What is claimed is:

1. A rotary indexing workholding fixture utilizing radially spaced interlocking surfaces wherein the design is such that contaminated electrical discharge machine fluids may enter the tool without negative effects, and the workholder of the tool is removable without unclamping the workpiece from the workholder, allowing the assembled workholder and workpiece to be removed, and subsequently returned to its original position.
2. A rotary indexing workholding fixture as in claim 1 with an additional set of radially spaced interlocking surfaces whose axis of rotation is perpendicular to the axis of rotation of the workholder, allowing the attachment of modular positioning elements.
3. A rotary indexing workholder as in claim 2 which has modular attachments which have radially spaced interlocking surfaces to engage the second set of interlocking surfaces of the body of the fixture, allowing angular indexing of the fixture while the attachments are mounted to a machine base.
4. A rotary indexing workholder as in claim 3 which has a machine mounted element with a vertical shape to match one of the attachments, allowing the indexing fixture assembly to be adjusted vertically without changing the relative angle of the fixture to the machine base, and allowing the indexing head to be lowered to the extent that the center of rotation of the indexing head is on a plane with the machine base.